

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of Claims:

1. (currently amended) A method comprising:

determining a concentration of a suppressor for a high-acid electroplating solution such that the suppressor concentration is sufficient to substantially reduce a plurality of electroplating defects in a semiconductor wafer while maintaining substantial gap fill in the semiconductor wafer;

~~only after determining the concentration of the suppressor,~~ determining a concentration of a chloride for the high-acid electroplating solution such that the chloride concentration is sufficient to catalyze the suppressor to maintain the gap fill in the semiconductor wafer while substantially reducing the plurality of electroplating defects in the semiconductor wafer;

~~only after determining the concentration of the suppressor,~~ determining a concentration of a leveler for the high-acid electroplating solution, the concentration of the leveler determined to reduce within die thickness variation to a specified value; and

~~only after determining the concentration of the chloride and the concentration of the leveler,~~ determining a concentration of an accelerator for the high-acid electroplating solution based upon the chloride concentration and the leveler concentration,

wherein the leveler concentration is in the range of 9ml/l – 12ml/l of the high-acid electroplating solution.

2. (original) The method of claim 1 wherein the plurality of electroplating defects include protrusion defects, bare test wafer defects, and pit defects.

3. (previously presented) The method of claim 2 wherein the concentration of suppressor is in the range of 3.3 ml/l – 20 ml/l of the high-acid electroplating solution.

4. (previously presented) The method of claim 3 wherein the concentration of suppressor is approximately 20 ml/l of the high-acid electroplating solution.
5. (previously presented) The method of claim 1 wherein the chloride level is in the range of 30 mg/l – 65 mg/l of the high-acid electroplating solution.
- 6-8. (canceled)
9. (previously presented) The method of claim 1 wherein the accelerator concentration is in the range of 1.5 ml/l – 3.3ml/l for a chloride concentration greater than 30 mg/l or a leveler concentration greater than 4 ml/l of the high-acid electroplating solution.
- 10-30. (canceled)